

2020 Census Detailed Operational Plan for: 31. Decennial Service Center Operation (DSC)

A New Design for the 21st Century

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Approvals

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1. Document Purpose

The 2020 Census Detailed Operational Plan for the Decennial Service Center operation (DSC) is intended for use by U.S. Census Bureau managers, staff, contractors, and other internal and external stakeholders working on the 2020 Census. The document presents the detailed operational design for the 2020 Census DSC operation and includes a summary of the operational processes involved, their inputs, outputs, controls, and the basic mechanisms employed to conduct the operational work.

Anticipated uses of this document include the following:

- Communication – Documents operational design details for internal and external stakeholders.
- Planning – Documents planning assumptions and key milestones.
- Staffing – Documents staffing needs and strategies.
- Design – Describes operations and flows, which inform design of Information Technology (IT) systems, manual processes, and training.
- Development – Identifies business rules and required capabilities to be developed.
- Testing – Provides a basis for developing integrated test plans for IT systems and processes.

This document complements the 2020 Census Operational Plan, which presents the 2020 Census operational design and covers all operations required to execute the 2020 Census, starting with precensus address and geographic feature updates and ending once census data products are disseminated and coverage and quality are measured.

2. Operational Overview

2.1 Operation Purpose

The Decennial Service Center (DSC) will support 2020 Census field operations for decennial census staff (i.e., headquarters, Paper Data Capture operation (PDC), regional census centers (RCC), area census offices (ACOs), Island Areas Censuses operation (IAC), remote workers, and listers/enumerators).

2.2 Background

The DSC is responsible for providing technical help desk services for 2020 Census field data collection activities and decennial census applications. The DSC will design and deploy an integrated service center that will handle information technology (IT) service requests and reported IT incidents initiated by 2020 Census operations customers. The scope of the project is limited to providing technical support for 2020 Census employees and decennial census application users. The DSC operation is run in overlapping phases, which started with the support of the 2014 Census Test. Successive phases of the operation will improve upon previous phases with a goal of designing and deploying a service center that fully meets business-level goals for the 2020 Census. Through collaboration with Field Division and decennial census stakeholders, as well as knowledge gained from supporting the 2014 – 2016 census tests, it has been determined that a decentralized approach to providing technical support for the 2020 Census operations is the most efficient and cost-effective strategy.

During the 2010 Census, Decennial Operations Technical Support (DOTS) provided technical support for field data collection activities. The support approach was based on a three-tier model escalating incoming trouble reports based on level of complexity, severity, and effort to resolve an issue. IT support staff in local census offices escalated automation issues/problems to their respective RCCs. Issues not resolved by RCC IT support were escalated to DOTS. A similar support model will be used for the 2020 Census technical support operation.

2010 Census IT support employed an Interactive Voice Response (IVR) system routing calls to DOTS help desk technical support areas, such as Decennial Applicant Personnel and Payroll System Support, Account Support, Office Computing Equipment Support, etc. For the 2020 Census, the IVR will be used to route calls based on the type of support needed, not just for technical support. This will allow for one support telephone number to be disseminated to customers, providing routing to the appropriate support team, such as payroll/personnel support, online training support, operational support, etc.

The 2010 Census IT support model provided for an emergency cell phone number to provide after hours support for emergency IT issues. For the 2020 Census, the DSC will vary business hours to cover the various time zones based on field data collection activity times. IT emergency issues outside of business hours will be routed to the Network Operations Center (NOC).

One of the key innovations for 2020 Census technical support is the automated ticket submission for voice mail. When a caller leaves a voice mail for technical support, a ticket will automatically be created in the Information Technology System Management (ITSM) system and routed to the appropriate office IT support team.

2.3 Design Overview

The sections below present the high-level design for the DSC operation. Please refer to the 2020 Census Operational Plan for a complete inventory of design decisions for all 2020 Census operations.

2.3.1 High-Level Operational Design

The design of the DSC operation for the 2020 Census includes four major operational activity areas:

- Perform DSC Planning and Preparation Activities.
- Provide Technical Support.
- Manage Support Services.
- Closeout DSC Operation.

Each of these major activity areas are summarized below. Together, these activities represent the complete set of work needing to be performed to conduct this operation.

Perform DSC Planning and Preparation Activities

The DSC will define the capability requirements, participate in User Acceptance Testing (UAT) and approve systems to be used by the DSC to provide technical support. The DSC will gather operational requirements and acquire the staffing contract for help desk staff located at the Greenbelt, Maryland facility. The Decennial Contracts Execution Office (DCEO), using contracted resources, will be responsible for the set-up of the Service Center. The DSC will prepare for and conduct training for technical staff.

Provide Technical Support

The DSC will receive requests for technical support typically from phone calls routed to the caller's local IT support staff. All support calls will be documented through the ITSM ticketing system. IT support staff will diagnose the issue and attempt to resolve it. The ticket will be resolved if the issue is successfully solved or escalated to the next support level if a solution is unsuccessful. The DSC will process service requests routed through the ITSM system to the appropriate support level based on complexity, severity, and effort to fulfill the request. The DSC will be responsible for communicating IT events and notifications to the field IT support staff and act as liaison between field IT support and HQ IT support.

Manage Support Services

The DSC will provide reports on technical support and services metrics based on stakeholder requirements. The DSC will perform oversight, monitoring, and reporting on the DSC contractor activities and performance.

Closeout DSC Operation

The DSC will conduct lessons learned debriefings for all levels of IT support provided during 2020 Census operations and provide a consolidated report to stakeholders. A final report will be provided after DSC operations have been completed. The final report will summarize metrics on reported incidents, IT service fulfillment metrics, and performance data. The DSC will phase out operations by reducing staff based on customer support needs and decommission the ITSM and call management systems used for Decennial IT support.

2.3.2 DSC Operational Context

The DSC operational activities described above are conducted within the context of other 2020 Census operations and other programs or data sources external to the 2020 Census Program. One way to depict an operational context is by using a “Context Diagram,” which shows the boundary of the operational process, the operational activities it contains, and the information exchanged with its neighbor operations (or other entities) as well as the resources (mechanisms) needed to conduct the operational work.

Figure 1 is a top-level context diagram for the DSC operation represented as an Integrated Definition, Level 0 (IDEF0) model. An IDEF0 model of a process (or operation) shows the Inputs, Controls, Outputs, and Mechanisms of the process. These IDEF0 model elements are summarized below and described further in the sections that follow.

The yellow box in the center of the IDEF0 model lists the major operational activity areas for the operation, numbered as given in the DSC operation Activity Tree in Appendix C. Specific Information Exchanges (IE) are shown in different colored boxes to represent the Inputs (green boxes on left side), Outputs (orange boxes on right side), Controls (purple boxes on top), and Mechanisms (blue boxes on the bottom). Boxes to the left of the Inputs indicate the *Provider* of the inputs to the operation (typically another 2020 Census operation or an external source). The Provider of the Controls is noted in the box itself. Boxes to the right of the Outputs indicate the *Receiver* of the outputs (typically another 2020 Census operation or external entity). Each Information Exchange has a name and a unique number for identification purposes.

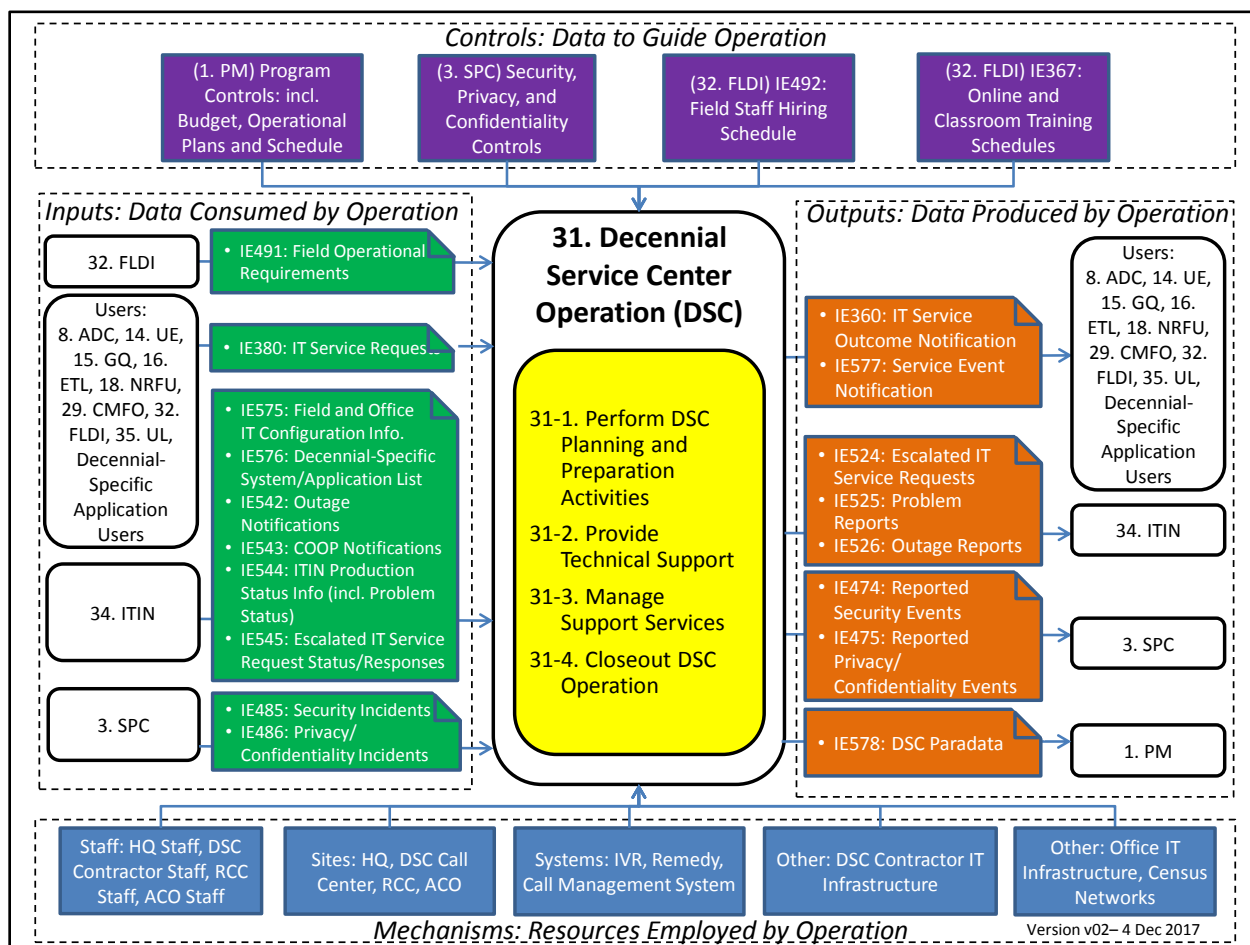


Figure 1: Decennial Service Center Operation (DSC) Context Diagram

For detailed descriptions of the Inputs, Controls, Outputs, and Mechanisms used by the DSC operation, see the sections that follow.

2.3.2.1 DSC Operational Inputs

Inputs are the data consumed by the operation. The inputs define the amount of operational work needing to be performed.

Table 1 lists the inputs to the DSC operation.

Table 1: DSC Operational Inputs

Provider	Information Exchange	Description
32. Field Infrastructure operation (FLDI)	IE491: Field Operational Requirements	The number and type of field staff by location requiring support from DSC.
Users: 8. Address Canvassing operation (ADC), 14. Update Enumerate operation (UE), 15. Group Quarters operation (GQ), 16. Enumeration at Transitory Locations operation (ETL), 18. Nonresponse Followup operation (NRFU), 29. Coverage Measurement Field operations (CMFO), 32. Field Infrastructure operation (FLDI), 35. Update Leave operation (UL), Decennial-Specific Application Users	IE380: IT Service Requests	Requests for information or advice, or for a standard change (a pre-approved change that is low risk, relatively common and follows a procedure) or for access to an IT service.
34. IT Infrastructure operation (ITIN)	IE575: Field and Office IT Configuration Info.	Detailed information about the configuration of the IT equipment in the field (e.g., devices).
	IE576: Decennial-Specific System/Application List	List of systems and applications used to conduct 2020 Census.

Provider	Information Exchange	Description
	IE542: Outage Notifications IE543: Continuity of Operations Planning (COOP) Notifications IE544: ITIN Production Status Info (incl. Problem Status)	Notifications and status updates provided by IT Management staff to inform the DSC staff of routine operations updates/changes and ITIN problem/incident status (including IT outages and COOP events).
	IE545: Escalated IT Service Request Status/Responses	Status and responses for escalated IT support requests from DSC.
3. Security, Privacy, and Confidentiality operation (SPC)	IE485: Security Incidents IE486: Privacy/Confidentiality Incidents	Notifications of ongoing Security Incident or Privacy/Confidentiality Incident status. Used to inform DSC staff of ongoing conditions regarding Security and Privacy/ Confidentiality.

2.3.2.2 DSC Operational Controls

Controls are the data guiding the behavior of the operation. They are not consumed by the operation, but rather they provide guidance, models, limits, criteria, cutoff dates, or other information controlling the way in which the operational work is performed.

Table 2 lists the controls for the DSC operation.

Table 2: DSC Operational Controls

Provider	Information Exchange	Description
1. Program Management operation (PM)	Program Controls	Program Control information including: <ul style="list-style-type: none"> Budget. Operational Plans and Schedule.

Provider	Information Exchange	Description
3. Security, Privacy, and Confidentiality operation (SPC)	Security, Privacy, and Confidentiality Controls	Laws, policies, regulations, and guidelines related to physical security, IT security, data security and privacy and confidentiality impacts, analyses, and processes. These include but are not limited to Title 13, Title 26, and other laws and policies related to protection of personally identifiable information.
32. Field Infrastructure operation (FLDI)	IE492: Field Staff Hiring Schedule	Schedule for field staff hiring by location.
	IE367: Online and Classroom Training Schedules	Schedules for field staff online and classroom training classes by location and operation.

2.3.2.3 DSC Operational Outputs

Outputs are the data produced by the operation. The outputs constitute the results of operational work performed. Outputs produced may be used as inputs or controls to other operations.

Table 3 lists the outputs from the DSC operation.

Table 3: DSC Operational Outputs

Consumer	Information Exchange	Description
Users: 8. ADC, 14. UE, 15. GQ, 16. ETL, 18. NRFU, 29. CMFO, 32. FLDI, 35. UL, Decennial-Specific Application Users	IE360: IT Service Outcome Notification	Notifications and status updates of IT service results provided to the users (requesters).
	IE577: Service Event Notification	Notifications to all users of a service event such as routine operations updates/changes, system problem/incident status or privacy/security incident status. Typically these are provided as part of the standard message users receive when they call in for help.

Consumer	Information Exchange	Description
34. IT Infrastructure operation (ITIN)	IE524: Escalated IT Service Requests	Requests for escalated IT Service that cannot be handled by DSC staff.
	IE525: Problem Reports IE526: Outage Reports	Problem and outage reports identified by DSC staff as they are responding to service requests and analyzing calls. These could include specific problems such as site IT network/router not operational or a more general trend such as an unusually high number of people reporting slow transmission times.
3. Security, Privacy, and Confidentiality operation (SPC)	IE474: Reported Security Events IE475: Reported Privacy/Confidentiality Events	Events and monitoring data provided to the SPC operation relating to security, privacy and confidentiality conditions.
1. Program Management operation (PM)	IE578: DSC Paradata	Status and progress data related to the DSC operational activities.

2.3.2.4 DSC Operational Mechanisms

Mechanisms are the resources (people, places, and things) used to perform the operational processes. They include Staff Resources, Infrastructure Sites, Systems, and Other Technology Infrastructure.

Staff Resources

Table 4 identifies the Staff Resources employed for the DSC operation.

Table 4: Staff Resources used within DSC Operational Activities

Staff Resources	Description/Role
HQ Staff	HQ staff who manages the DSC operation and coordinates activities with the DSC contractor staff, RCC staff, and ACO staff.
DSC Contractor Staff	DSC contractor provides the technical support staff to handle the support requests from DSC users. Additional staff provided by DSC contractor includes telephone operators, supervisors, and contractor management staff.
RCC Staff	Staff at the RCC who provide the technical support for DSC users. Puerto Rico Area Office (PRAO) staff performs similar support functions within their designated Census region.
ACO Staff	Staff at the ACO who provide the technical support for DSC users.

Infrastructure Sites

Table 5 identifies the Infrastructure Sites employed for the DSC operation.

Table 5: Infrastructure Sites for DSC Operational Activities

Infrastructure Site	Description/Role
Census Headquarters (HQ)	HQ site for office work conducted in support of the DSC operation. This permanent site in Suitland, MD, manages the operation throughout the country.
DSC Call Center	Facilities hosting DSC call center infrastructure.
RCC (regional census center)	RCC hosts distributed technical support staff who provide the technical support for DSC users.
ACO (area census office)	ACO hosts distributed technical support staff who provide the technical support for DSC users.

Systems and other Technology Infrastructure

Table 6 identifies the Systems employed for the DSC operation.

Table 6: Systems used within DSC Operational Activities

System	Description
Interactive Voice Response (IVR) System	An Interactive Voice Response System is used to route callers to the central Decennial Service Support Center phone number to the appropriate service support staff, e.g., SPC Security Incident Response Hotline, FLDI Payroll Support Staff, FLDI Census Field Supervisor Hotline, or DSC Technical Support Helpdesk.
Remedy	An Incident management tool used to log and monitor the issues or problems faced by the customers.
Call Management System	A Call Management System is used to route incoming DSC Technical Support Helpdesk calls to available DSC Technical support staff and track staff availability for ongoing call workload.

Other Technology Infrastructure employed for the DSC operation includes:

- Office IT Infrastructure at headquarters for conducting DSC operational work. This infrastructure is provided by the IT Infrastructure (ITIN) operation.
- Census Network connectivity for data transmission between operational systems and operational sites. This connectivity is provided by ITIN.
- DSC Contractor IT Infrastructure for providing services on behalf of DSC.

2.4 DSC Data Flow and Operational Influences

Figure 2 is an Integrated Operations Diagram (IOD), which depicts the major interactions among the operations involved in planning and supporting the execution of field data collection operations for the 2020 Census (stateside and Puerto Rico). It shows six field data collection operations requiring support in blue in the middle of the chart: the in-field component of the Address Canvassing operation (ADC), the Update Enumerate operation (UE), the Group Quarters operation (GQ), the Enumeration at Transitory Locations operation (ETL), the Nonresponse Followup operation (NRFU), and the Update Leave operation (UL).

Field support for the Coverage Measurement Field Operations (CMFO), the Evaluations and Experiments operation (EAE), and the Island Areas Censuses operation (IAC) are not included.

Primary support for these field data collection operations is provided by four different infrastructure support operations:

- **Field Infrastructure operation (FLDI):** FLDI provides Human Resources and Personnel Management Support and also operates the field offices.
- **IT Infrastructure operation (ITIN):** ITIN has broad responsibility for all the IT Infrastructure to support the 2020 Census. For field support, ITIN provides devices to field staff and provides IT equipment installation and disposition support for the regional census centers (RCCs), the Puerto Rico Area Office (PRAO), and area census offices (ACOs).
- **Decennial Logistics Management operation (DLM):** DLM acquires and leases office space for RCCs, PRAO, and ACOs; provides supplies, materials, and logistics support for these offices; and assembles and delivers kits for office and field staff.
- **Decennial Service Center operation (DSC):** DSC provides technical support for field staff.

Other operations contribute to field support. The Content and Forms Design operation (CFD) and the Forms Printing and Distribution operation (FPD) provide approved print files and paper questionnaires or questionnaire packages, respectively, to DLM for distribution to the field staff in kits and supply shipments. The Integrated Partnership and Communications operation (IPC) coordinates the development and reviews of the communications materials for the recruiting

campaign.¹ The Geographic Programs operation (GEOP) provides geographic information to support recruiting and assignments and also field data collection, and the Archiving operation (ARC) receives data from FLDI for archival.

The operations and associated functions are aligned with various phases of field support, as shown across the top of the diagram. The ***Planning and Analysis Phase*** occurs well before the census begins and includes long-term planning activities, such as estimating workload and staffing needs, determining the number and types of offices and the staffing structure within each office type, and determining space requirements. The ***Preparation Phase*** includes additional planning activities that require less lead time but still occur before the census starts. The ***Recruiting, Onboarding, and Training Phase*** includes those activities involved in providing trained and equipped staff to support the work of the Census Bureau and the logistics and office management support required while people are being hired. The ***Data Collection Phase*** is when the actual work of the census is done. This phase begins with In-Field Address Canvassing in late 2019 and continues until the field data collection operations are completed. At the end of data collection, the ***Closeout Phase*** begins and field operations are shut down and temporary employees outprocessed. The field data collection operations are staggered, thus the relevant preparation and recruiting, onboarding, and training activities are also staggered.

The discussion below walks the reader through the diagram, a phase at a time, using the circled numbers to help the reader follow the flow.

¹ IPC also includes a field-based partnership program, which is not shown on this diagram. The Partnership Program is focused on encouraging self-response and is not directly associated with supporting the field data collection operations.

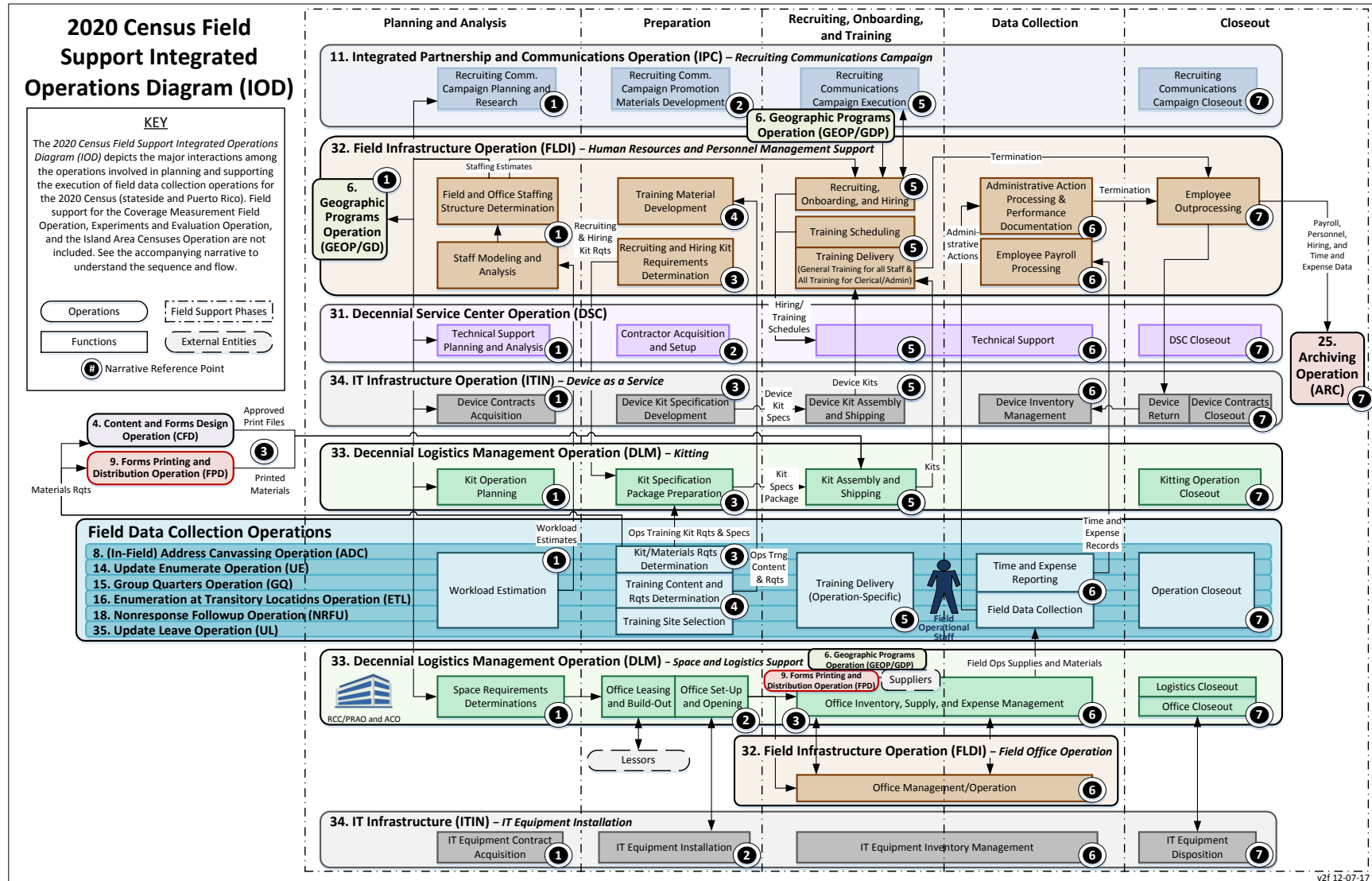


Figure 2: 2020 Census Field Support - Integrated Operations Diagram (IOD)

Planning and Analysis Phase

① Well in advance of the start of fieldwork for the 2020 Census, the field data collection operations estimate their operational workload and provide these estimates to FLDI, which runs staff models and conducts analyses to determine the field staffing size by geographic area. Based on this information, FLDI determines the structure and size of the field staff within the offices and the number of people expected to be hired by geographic area. These staffing estimates are refined over time and are used by all field support operations for their planning activities: DLM uses this information to determine the space requirements; FLDI uses the refined analysis to identify recruiting goals by tract; and DSC uses these data to plan its support needs.

Other activities that occur during the Planning and Preparation Phase include the following:

- IPC conducts research and planning to determine the most effective approaches for the recruiting communications campaign.
- GEOP delineates the field management areas used for recruiting and staff assignments based on the inputs from FLDI.
- ITIN acquires the contracts for the devices that will be needed by the field and office staff and plans for and acquires the contract to support the installation and disposition of the office IT equipment.

Staffing estimates by geographic area help inform the planning and contracting activities for all three operations.

Preparation Phase

② Starting in 2017, DLM works with the General Services Administration to find appropriate office space, lease the space, and arrange for the build-out of the space to meet 2020 Census space requirements. Contracts are executed with lessors who provide the space and support the build-out activities. DLM also sets up the office space, coordinating with ITIN, which provides the IT equipment and ensures it is properly installed. Once all the furnishings are in place and the equipment is operational, DLM opens the field offices, turning them over to FLDI (see discussion for number 6 below) to operate.

Also during the Preparation Phase, DCEO selects the contractor who will provide the technical support and sets up its service center(s). As part of these preparation activities, DCEO hires and trains the staff that will be providing the technical support.

IPC's preparation activities for field support include reviewing materials, developed by the Integrated Communications Campaign contractor in conjunction with FLDI, to support recruiting operations.

3 Staff in the field needs supplies and other materials for training and to conduct the work. Initial supplies and materials are provided to field staff in different types of kits:

- Recruiting kits: Contain the supplies and materials needed by recruiting staff for recruiting activities.
- Hiring kits: Contain the supplies and materials needed by field office staff for hiring activities.
- Operational training kits: Contain the supplies and materials needed during training of the field operational staff (supervisors, enumerators, and listers).
- Device kits: Contain the device and any supporting equipment and documentation. The type of device varies depending on the role of the person receiving the device.

DLM prepares the recruiting and hiring kits based on content requirements and specifications provided by FLDI and the operational training kits based on content requirements and specifications provided by the individual field data collection operations (ADC, UE, GQ, ETL, NRFU, CMFO, and UL). DLM also provides bulk office supplies to RCCs, PRAO, ACOs, and Island Areas staff. The field data collection operations also provide requirements for nonquestionnaire paper materials (public-facing forms) to CFD, which develops the content of these materials, and once approved by the field data collection operations, sends them as print files to DLM for printing and kit assembly. Operations that require paper questionnaires (i.e., UE, GQ, ETL, and UL) provide requirements for paper questionnaires and questionnaire packages to FPD, which prints these materials and sends them to DLM to include as needed in the appropriate operation-specific training kits.

Contents of the device kits are determined by ITIN with input from the various field operations and information systems development teams.

4 Another activity performed during the preparation phase is the development of training materials. Two primary types of training are provided to field staff. The first is general training, which includes standard Census Bureau training for new employees as well as training on how to perform 2020 Census administrative activities such as submitting time and expense data. FLDI works with the Census Bureau Human Resources department to identify and develop the general training materials. The second type of training is operation-specific training. The content and requirements for the operation-specific training are determined by the field data collection operations and provided to FLDI, which creates the training materials for all the operations. FLDI creates both online and classroom training materials.

Classroom training is conducted at local sites, such as community centers or libraries. The field data collection operations are responsible for selecting these sites.

Recruiting, Onboarding, and Training Phase

5 Based on the field staffing and office structure decisions, Recruiting coordinators recruit management staff for the RCCs and ACOs and clerical staff for the ACOs. Recruiting coordinators and other RCC staff will recruit the initial number of recruiting assistants (RAs) needed to recruit for ACO staff level positions. The RAs will then recruit additional RAs, partnership specialists, Census Field Supervisors, enumerators, listers, Office Operations Supervisors, and clerks to support various field operations. The activities involved in this phase include recruiting and selecting applicants, processing applicant background checks, and then hiring and training those selectees who have passed the background check. These activities are part of FLDI. IPC supports these efforts through its development and review of recruiting campaign promotional materials and the Partnership Program (which directly supports recruiting efforts). GEOP provides geographic data services to geocode the home locations of applicants as part of FLDI recruiting work. GEOP also provides the large format paper maps needed in the field offices.

FLDI creates and maintains a training schedule based on the production schedule and hire dates. This schedule is shared with the trainees (new employees) as well as the trainers. Selectees do not become census employees until they are sworn in on the first day of training. FLDI delivers the general training for all staff as well as job-specific training for clerical and administrative staff, including RAs, partnership specialists, office supervisors, and clerks. The field data collection operations provide the operation-specific training for field operations staff.

All kits are sent to FLDI, which delivers the kits to the staff during training. DLM assembles and ships the recruiting, hiring, and operational training kits to FLDI, and ITIN assembles and ships the device kits to FLDI.


DSC relies on hiring and training schedules from FLDI to initiate its technical support activity. One role of DSC during this phase is to initiate the request for ITIN to open and activate the IT accounts for field and office staff. (ITIN's role in activating accounts is not shown on the diagram.)

Data Collection Phase

6 During data collection, the field data collection operations perform their data collection activities and report time and expense information. In support of this, FLDI handles any employee administrative actions (including documenting performance and conduct) and processes employee payroll. DSC serves as the first line of technical support for all field and office staff.

Field offices are open and operational beginning in the Recruiting, Onboarding, and Training Phase and continuing through the Data Collection Phase. FLDI is responsible for operating the offices. DLM is responsible for providing supplies and logistics support to the offices and for maintaining the inventory of all field office assets. This includes replenishment of paper materials needed to support the field operations (e.g., Notice of Visit forms provided by DLM, paper questionnaires/questionnaire packets for paper-based enumeration operations provided by FPD, and paper maps and address registers needed for paper-based data collection operations provided by DLM based on data provided by GEOP). FPD will print additional questionnaires and questionnaire packets as needed and provide them to DLM for delivery to the field. ITIN manages the inventory of the devices sent to field staff as well as the inventory of the office IT equipment.

Closeout Phase

 As field data collection winds down, the field data collection operations prioritize activities for the remaining cases, determine when data collection stops for each geographic area, and finish their work.

The field support operations also perform close-out activities:

- FLDI outprocesses field staff, coordinating with ITIN regarding the return of devices and sends payroll, personnel, hiring, and time and expense data to ARC.
- FLDI ends recruiting activities.
- DLM closes the offices, dispositioning all furniture and non-IT equipment.
- DLM shuts down its kitting and logistics support operations.
- ITIN disposes IT equipment and closes the device contracts.
- DSC shuts down technical support for the field, however, technical support for HQ continues.
- IPC shuts down its recruiting communications campaign.

2.5 DSC Design Assumptions

Assumptions upon which the DSC operation design is based are listed below.

- A separate instance of Remedy will be developed for use as the ITSM for Decennial IT support.
- An IVR system will be provided.
- Field Division will provide IT support staff for the ACOs and RCCs.
- The Technical Integrator (TI) will provide staffing and facilities for the HQ help desk.

3. Decennial Service Center Operation (DSC) Detailed Process Description

Figure 3 is a top-level Business Process Model (BPM) showing the Level 1 activity areas within the DSC operation. BPMs for the 2020 Census follow industry-standard Business Process Model and Notation (BPMN). An explanation of how to read the BPMN notations and a full sized copy of all of the BPMN diagrams for this operation are provided under separate cover.

This top-level BPM serves as the Context Model for the DSC operation. A BPMN Context Model displays the high-level activities within the operation and relationships between them, whereas the IDEF0 Context Diagram shown earlier depicts the boundaries of the operation or activity and the interfaces between the operation or activity and other operations and activities with which it is associated.

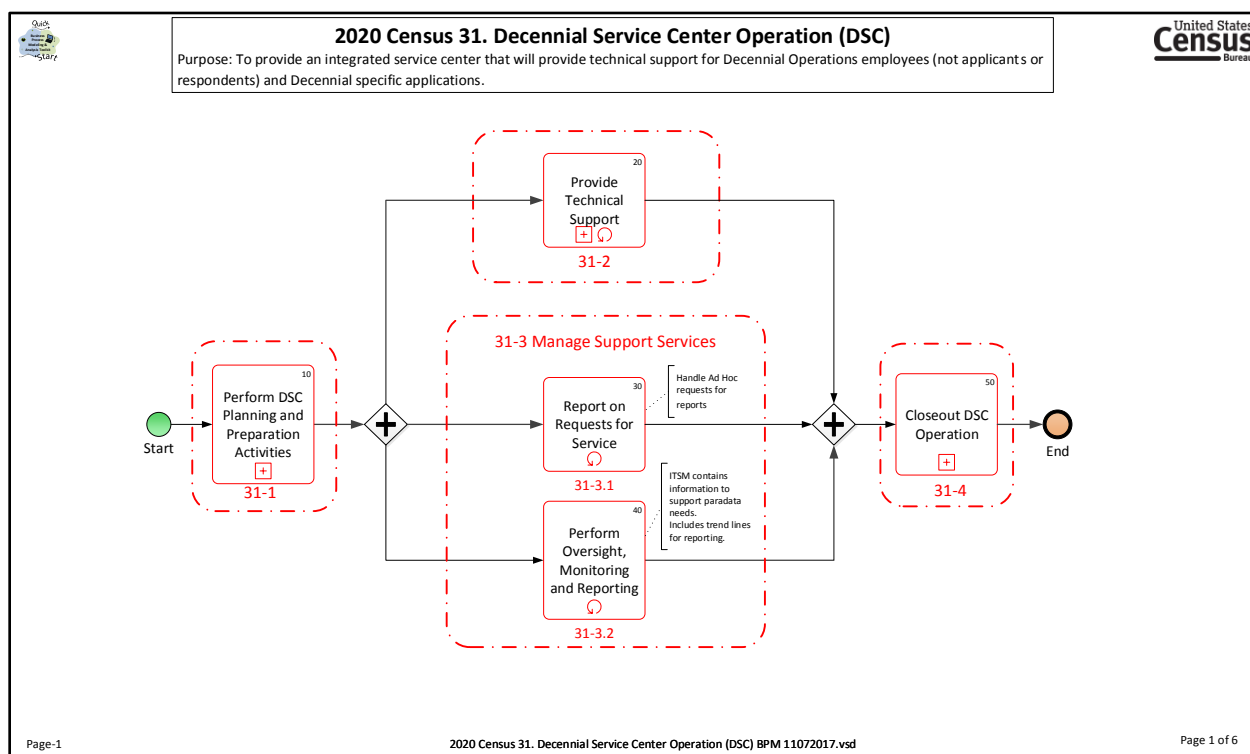


Figure 3: DSC Operation Context Model

The DSC operation is subdivided into the following Activity Areas.

- Perform DSC Planning and Preparation Activities [31-1].
- Provide Technical Support [31-2].

- Manage Support Services [31-3].
- Closeout DSC operation [31-4].

The business processes for each of these Level 1 activity areas are discussed along with their inputs and outputs in the following subsections.

3.1 Perform DSC Planning and Preparation Activities [31-1].

Figure 4 shows the BPM for the Perform DSC Planning and Preparation Activities [DSC 31-1] activity area (area within the shaded gray rounded rectangle) and its constituent activities within the overall context of the DSC operation.

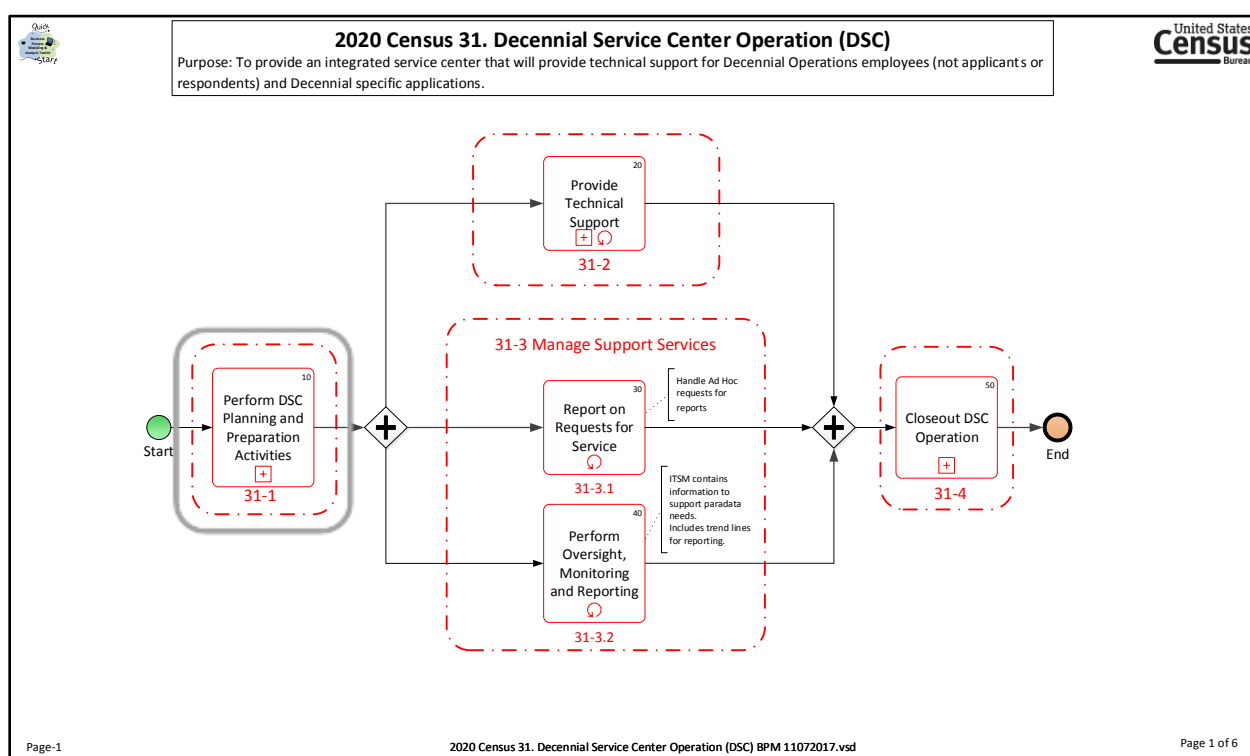


Figure 4: Perform DSC Planning and Preparation Activities [31-1] Constituent Activities

A detailed view of the constituent activities that make up the “Perform DSC Planning and Preparation Activities” operational subactivity is given in Figure 5 below.

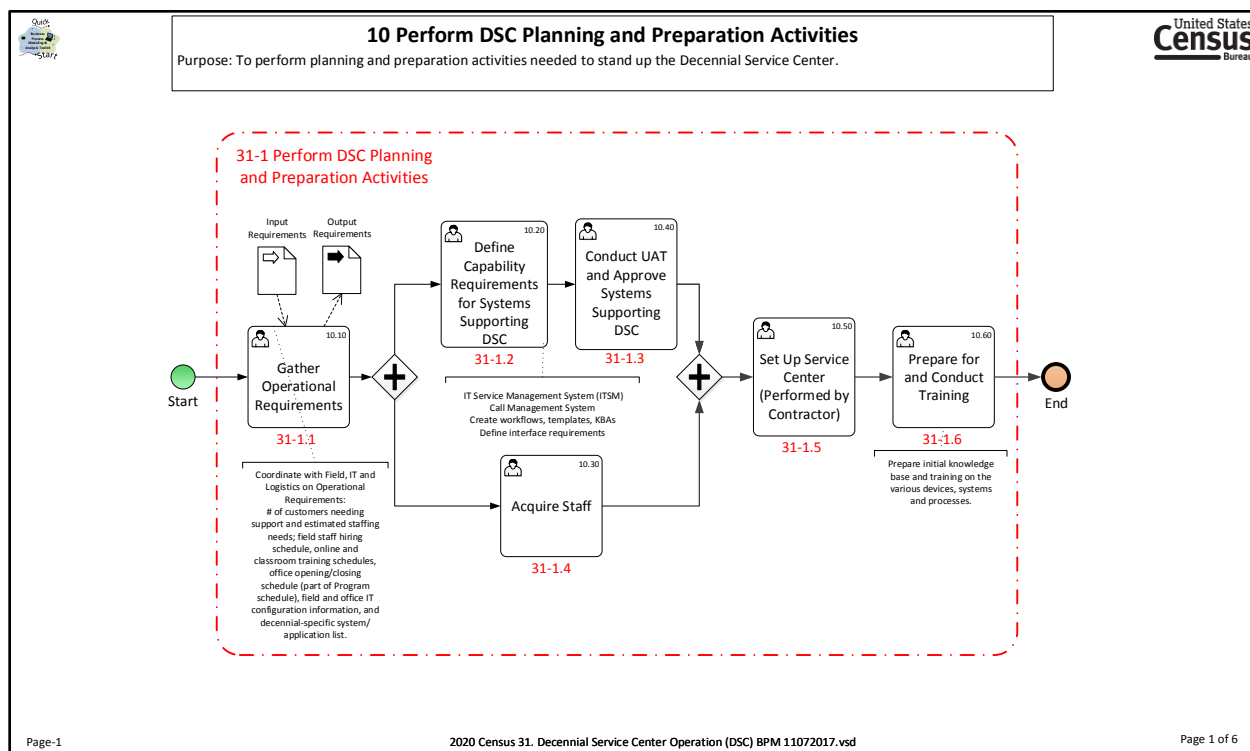


Figure 5: Perform DSC Planning and Preparation Activities

The Perform DSC Planning and Preparation Activities activity area is subdivided into the following operational subactivities:

- Perform DSC Planning and Preparation Activities [DSC 31-1].
 - Gather Operational Requirements [DSC 31-1.1].
 - Define Capability Requirements for Systems Supporting DSC [DSC 31-1.2].
 - Conduct UAT and Approve Systems Supporting DSC [DSC 31-1.3].
 - Acquire Staff [DSC 31-1.4].
 - Set Up Service Center [DSC 31-1.5].
 - Prepare for and Conduct Training [DSC 31-1.6].

Subsequent sections describe the DSC Planning and Preparation Activities operational subactivities in detail.

3.1.1 Gather Operational Requirements [DSC 31-1.1].

The DSC Integrated Project Team (IPT) will coordinate with 2020 Census operational areas requiring technical help desk support to collect support requirements. Operational areas include but may not be limited to Address Canvassing (ADC), Group Quarters (GQ), Nonresponse Followup (NRFU), Island Areas Censuses (IAC), Update Enumerate (UE), Update Leave (UL),

the Coverage Measurement Field Operations (CMFO), Post Enumeration Survey, Paper Data Capture (PDC), Integrated Partnership and Communications (IPC), and Recruiting, as a part of FLDI. The DSC will also provide support for Safety, Security, and Cyber Incident Management (SSCIM) reporting.

The operational requirements will include the number of customers needing support, estimated staffing needs, field staff hiring schedule, online and classroom training schedules, office opening/closing schedule, field and office IT configuration information, and the decennial-specific system/application list.

3.1.2 Define Capability Requirements for Systems Supporting DSC [DSC 31-1.2].

The DSC IPT will coordinate with the TI and DCEO management to provide capability requirements for the systems supporting the DSC. Systems required to support the DSC include the ITSM tool and the IVR call management system. Capability for the requirements for the ITSM tool will include Incident Management, Service Management, Knowledge Management, and interface requirements. Capability requirements for the IVR call management system will include system capacity, call routing, and access.

3.1.3 Conduct UAT and Approve Systems Supporting DSC [DSC 31-1.3].

DCEO management will coordinate with the TI to conduct UAT for the ITSM tool and IVR call management system when the TI delivers the systems.

3.1.4 Acquire Staff [DSC 31-1.4].

The DSC IPT and DCEO management will coordinate the required support for SSCIM, FLD OPS and PDCC. Field Division will be responsible for providing staff for supporting SSCIM at the NPC call centers (Jeffersonville and Tucson) and FLD OPS tier 1 at the RCCs and ACOs. The 2020 Technical Integrator (2020 TI) provides tier 2 IT Support for FLD OPs and coordinator communication between tier 3 and the field offices. The Field Information Technology Deployment (FITd) contract will provide on-site tier 1 and tier 2 support and system administration support staff for the Paper Data Capture centers (PDCC).

3.1.5 Set Up Service Center [DSC 31-1.5].

The HQ service desk will be located in the Greenbelt facility. Staffing will be the responsibility of the TI under the TD. Equipment will be provided under the FITd contract.

3.1.6 Prepare for and Conduct Training [DSC 31-1.6].

The DSC IPT and DCEO management will coordinate with the TI to develop IT support training. DCEO management will provide training material content to the TI based on operational support

requirements. The TI will develop online training modules, job aids and Knowledge-Based Articles (KBAs) with the content provided by DCEO management. Training plans for each level of IT support staff will be developed and implemented.

3.2 Provide Technical Support [31-2].

Figure 6 shows the BPM for the Provide Technical Support [DSC 31-2] activity area (area within the shaded gray rounded rectangle) and its constituent activities within the overall context of the DSC operation.

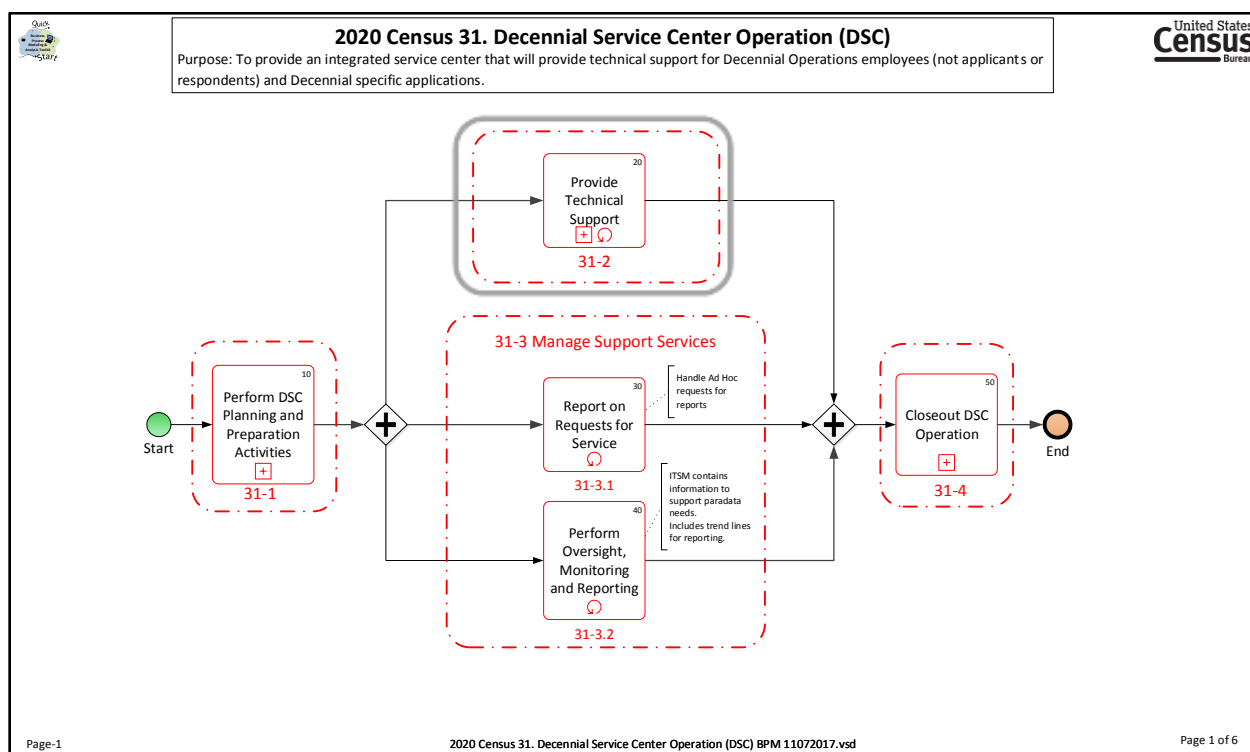


Figure 6: Provide Technical Support [31-2] Constituent Activities

A detailed view of the constituent activities that make up the “Provide Technical Support” operational subactivity is given in Figure 7 below.

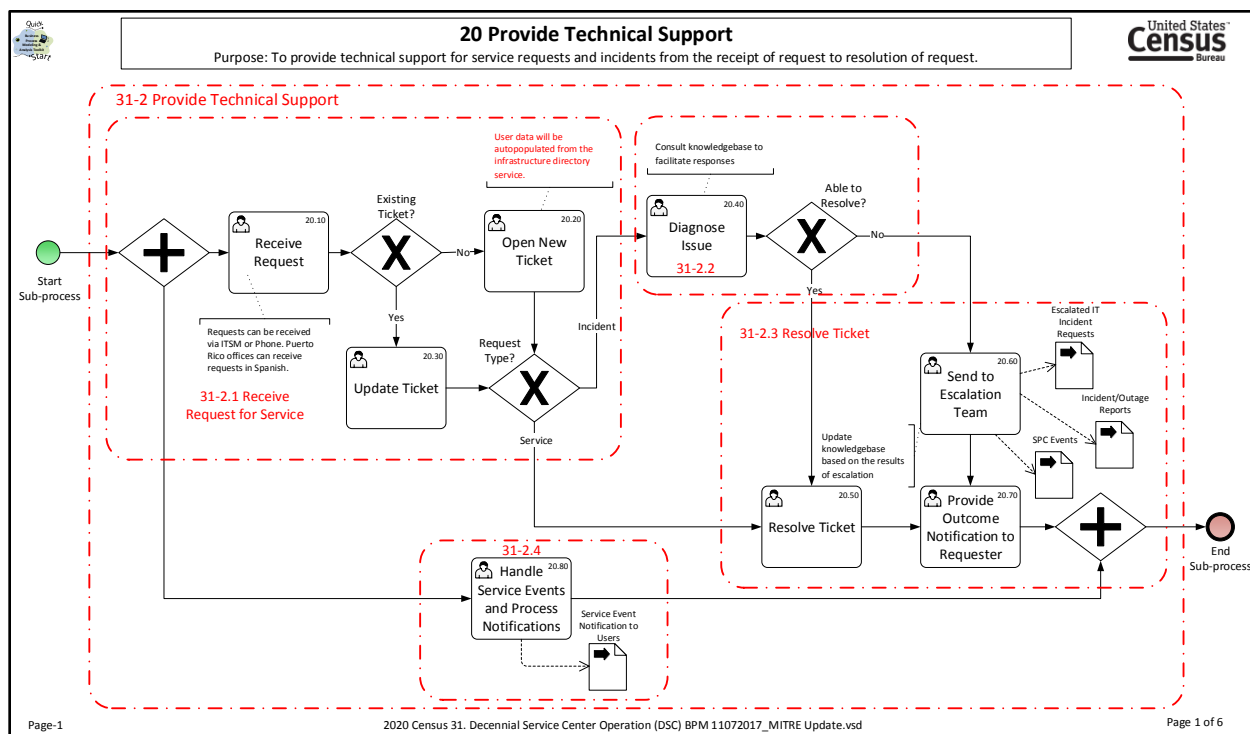


Figure 7: Provide Technical Support

The Provide Technical Support activity area is subdivided into the following operational subactivities:

- Provide Technical Support [DSC 31-2].
 - Receive Request for Technical Support [DSC 31-2.1].
 - Diagnose Problem [DSC 31-2.2].
 - Resolve Ticket [DSC 31-2.3].
 - Handle Service Events and Process Notifications [DSC 31-2.4].

2020 Census employees will request technical support by calling the 2020 Census support phone number. IT service requests may also be submitted by IT support staff with access to the ITSM tool. The largest customer base requesting technical support by phone will be the field workers (enumerators, listers and census field supervisors). Calls will be routed to the local IT support staff based on user input via the IVR call management system. All requests will be submitted through a ticket in the ITSM tool. IT support staff will use KBAs within the ITSM tool to diagnose issues and provide solutions. Tickets will be resolved if the issue is solved, and unresolvable issues will be escalated to the next higher tier of support. Service requests will be assigned to the appropriate support team and processed within Service Level Agreements (SLAs). IT notifications will be disseminated when necessary.

Subsequent sections describe the Provide Technical Support operational subactivities in detail.

3.2.1 Receive Request for Technical Support [DSC 31-2.1].

A detailed view of the constituent activities that make up the “Receive Request for Technical Support” operational subactivity is given in Figure 8 below.

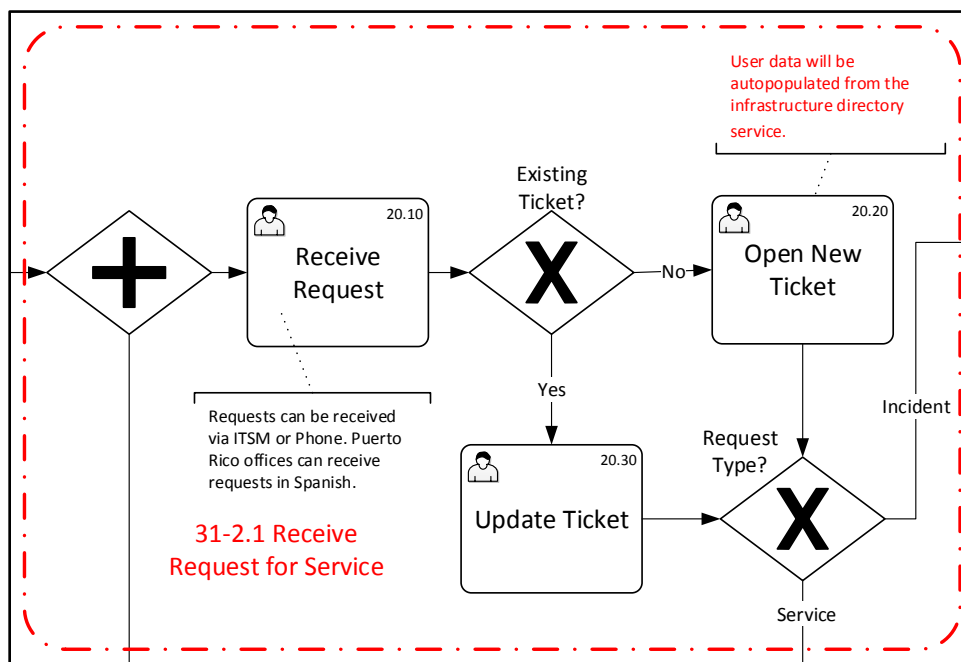


Figure 8: Receive Request for Service

There are two types of requests that may be received by the DSC. The DSC will receive requests for technical support through phone calls to the 2020 Census support phone number. Requests for IT services, such as employee entrance, application access, or telecom services will be submitted directly through the ITSM tool by IT support staff. Calls will be routed to the appropriate support team based on user input via the IVR call management system. An incident ticket will be submitted for all technical support requests. If an employee is calling about an ongoing incident with an open ticket, the existing ticket will be updated. Incident tickets will be submitted by selecting templates based on the issue reported. KBAs related to the issue will be linked to the template.

3.2.2 Diagnose Issue [DSC 31-2.2].

A detailed view of the constituent activities that make up the “Diagnose Issue” operational subactivity is given in Figure 9 below.

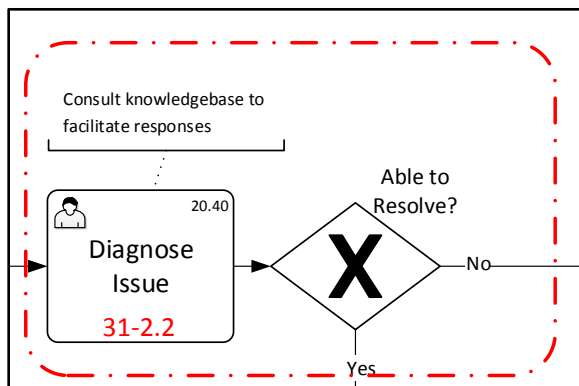


Figure 9: Diagnose Issue

Once an incident ticket is created, IT support staff will diagnose the issue using KBAs provided in the ITSM tool. KBAs will contain step-by-step instructions for issue diagnosis and solution.

3.2.3 Resolve Ticket [DSC 31-2.3].

A detailed view of the constituent activities that make up the “Resolve Ticket” operational subactivity is given in Figure 10 below.

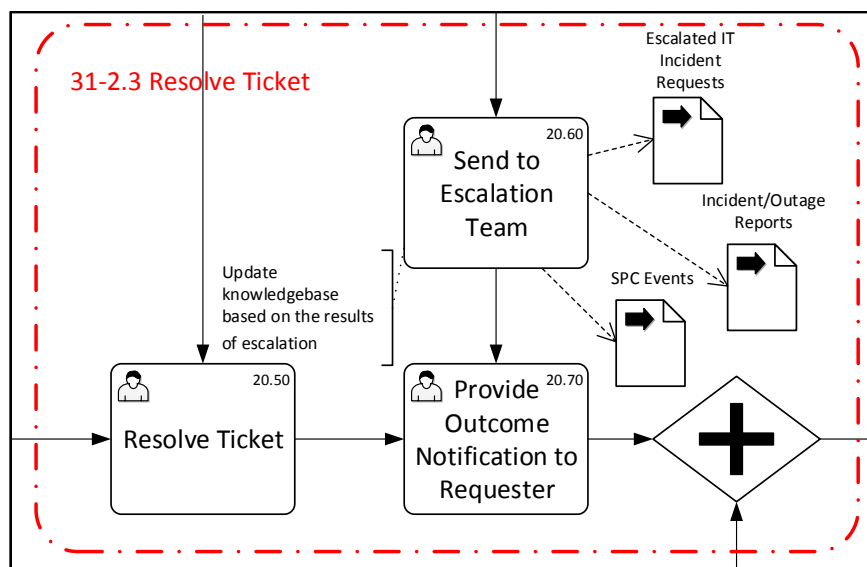


Figure 10: Resolve Ticket

Tickets submitted for IT service requests will be routed to the appropriate support team. Once the service has been fulfilled, the ticket will be resolved and the requester will be notified by the

appropriate means. Incident tickets will either be resolved or escalated to the next higher tier of support. An escalated ticket will be resolved by the support team correcting the issue. If the issue reported is a new issue, the Knowledge Management system will be updated documenting the issue and resolution.

3.2.4 Handle Service Events and Process Notifications [DSC 31-2.4].

Refer to Figure 7 to see where “Handle Service Events and Process Notifications” fits in the “Provide Technical Support” process.

Service events, such as planned and unplanned outages, will be communicated to the appropriate groups. The type of issue will determine the means of notification. The primary method of notification will be email; however, if email is unavailable, phone calls or the Emergency Notification System may be employed. The TI will provide a NOC and Security Operations Center (SOC) to coordinate teams required to resolve widespread IT service events, such as outages. The DSC will participate, as appropriate, to resolve IT service events. Participation may include joining response activities established by the NOC or SOC, providing incident data or monitoring incident trends for the purpose of resolving service events.

3.3 Manage Support Services [31-3].

Figure 11 shows the BPM for the Manage Support Services [DSC 31-3] activity area (area within the shaded gray rounded rectangle) and its constituent activities within the overall context of the DSC operation.

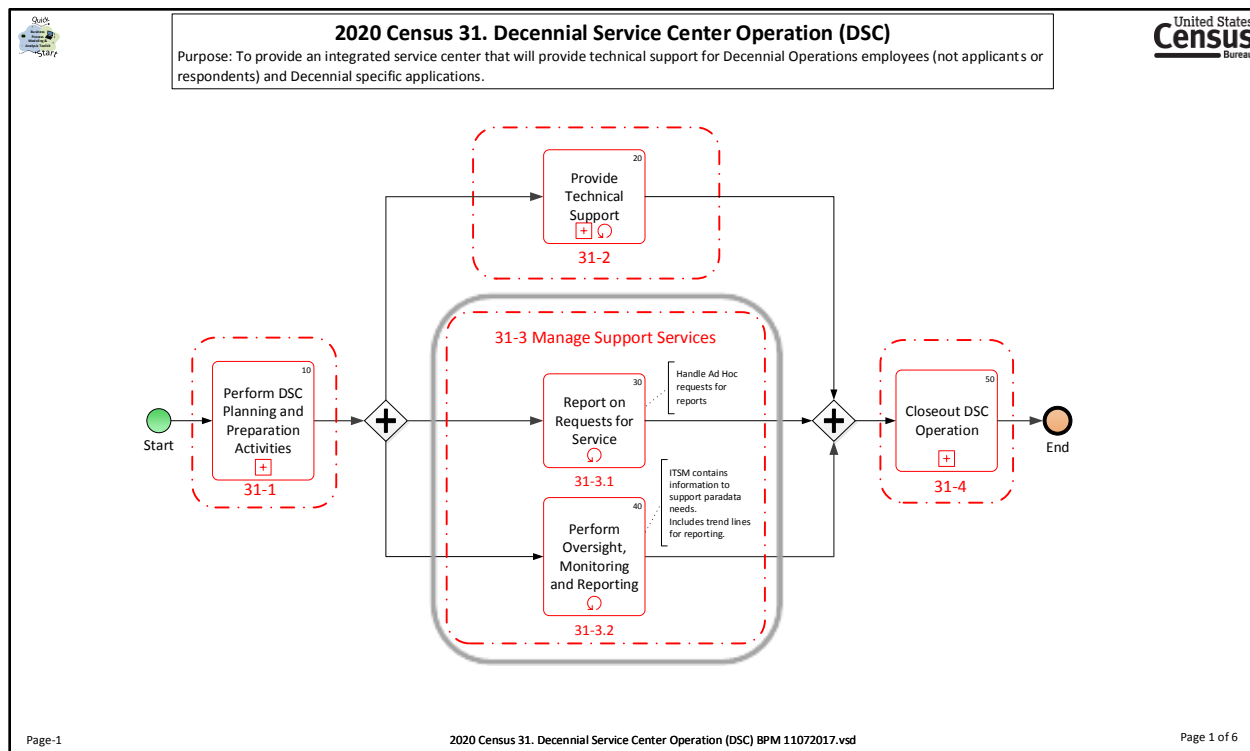


Figure 11: Manage Support Services [31-3] Constituent Activities

The Manage Support Services activity area is subdivided into the following operational subactivities:

- Manage Support Services [DSC 31-3].
 - Report on Request for Service [DSC 31-3.1].
 - Perform Oversight, Monitoring, and Reporting [DSC 31-3.2].

Automated and ad hoc reporting will be used to report, monitor, and oversee DSC support activities. SLAs will be established by the TD and monitored by Federal oversight management to ensure the IT support and service fulfillment requirements are being met.

Subsequent sections describe the Manage Support Services operational subactivities in detail.

3.3.1 Report on Request for Service [DSC 31-3.1].

The DSC operation will develop consolidated status reports for executive management and appropriate stakeholder review. The ITSM tool will be configured to provide automated daily, weekly, and monthly status reports on ticket submission metrics, type of issues reported, and resolution information. Ad hoc reporting functionality will also be available to monitor incident and service trends.

3.3.2 Perform Oversight, Monitoring and Reporting [DSC 31-3.2].

Once the 2020 Census DSC operation begins, all aspects of its performance will be monitored. Incident reports will be monitored and evaluated to determine the efficiency of resolution methods and identify new opportunities for productivity. An important part of the design of the DSC operation will be monitoring incident and service event trends to proactively address IT problems and make adjustments as necessary to improve the effectiveness of the operation. The DSC team will make adjustments to system processes, knowledge management, and service fulfillment as determined during daily monitoring.

3.4 Closeout DSC Operation [31-4].

Figure 12 shows the BPM for the Closeout DSC operation [DSC 31-4] activity area (area within the shaded gray rounded rectangle) and its constituent activities within the overall context of the DSC operation.

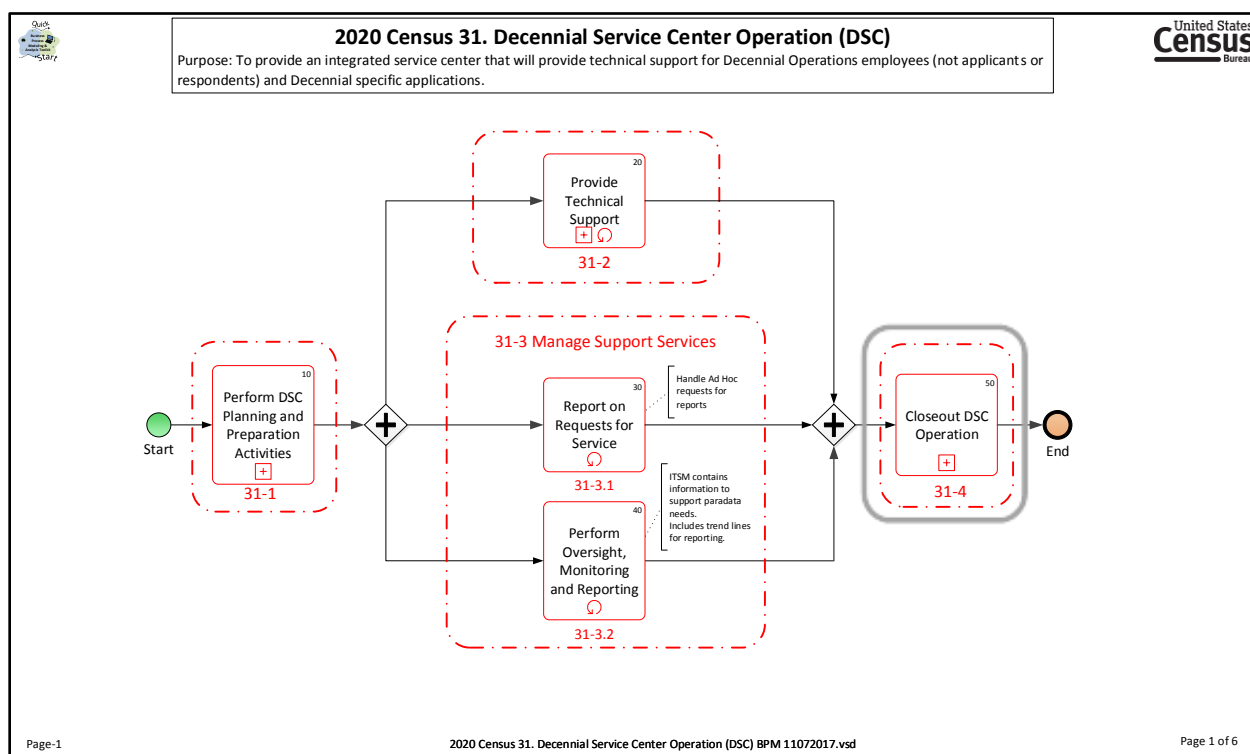


Figure 12: Closeout DSC Operation [31-4] Constituent Activities

A detailed view of the constituent activities that make up the “Closeout DSC operation” operational subactivity is given in Figure 13 below.

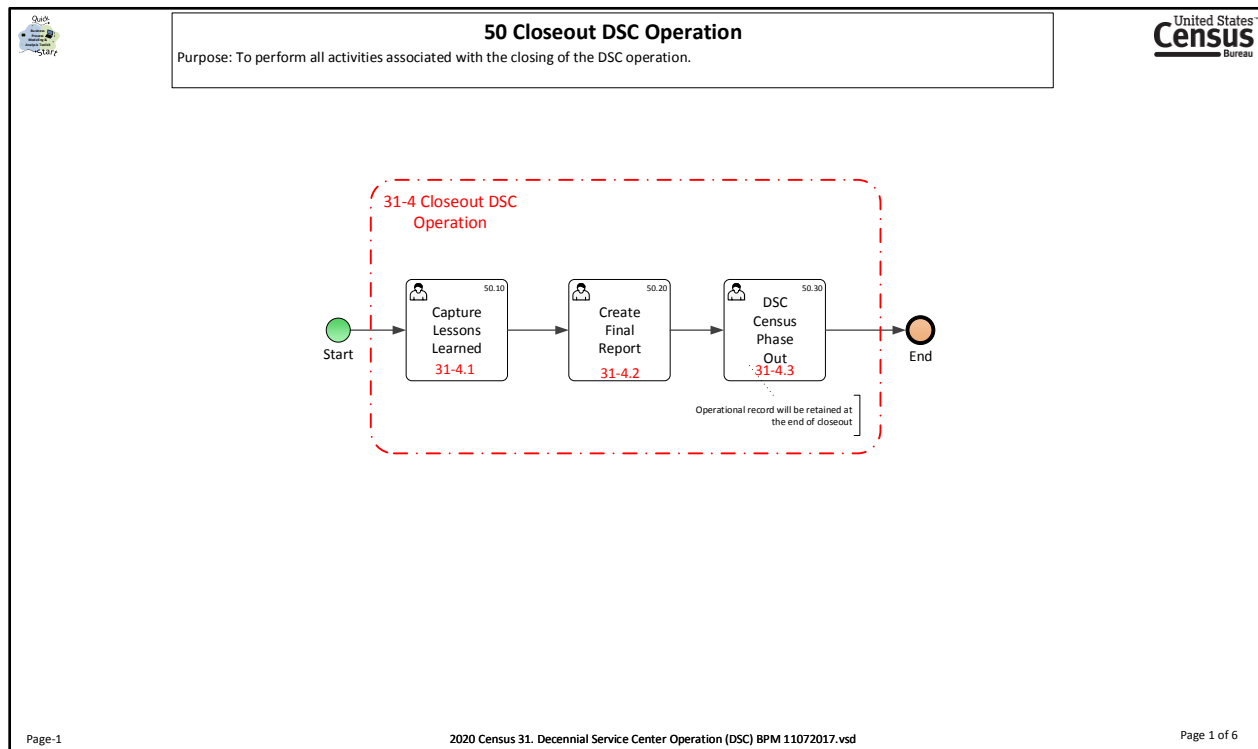


Figure 13: Closeout DSC Operation

The Closeout DSC operation activity area is subdivided into the following operational subactivities:

- Closeout DSC operation [DSC 31-4].
 - Capture Lessons Learned [DSC 31-4.1].
 - Create Final Report [DSC 31-4.2].
 - DSC Census Phase Out [DSC 31-4.3].

IT support staff at all levels of technical support will be asked to provide lessons learned data, which will be consolidated into a Lessons Learned report. A final report will be provided containing summary metric data and information on contractor performance. The DSC will be phased out based on technical support needs for closing Decennial Census operations.

Subsequent sections describe the Closeout DSC operation operational subactivities in detail.

3.4.1 Capture Lessons Learned [DSC 31-4.1].

After the completion of the DSC operation, lessons learned debriefings will be conducted, and assessment reports will be written.

3.4.2 Create Final Report [DSC 31-4.2].

Daily, weekly, and monthly reports produced throughout the operation will be consolidated and summarized into final IT support and services metrics data. Data on DSC performance at all IT support levels will be summarized, including suggestions and recommendations for improvements. The Lessons Learned report will be integrated into the final report.

3.4.3 DSC Census Phase Out [DSC 31-4.3].

Employment will be progressively reduced based on the number of users requiring support. The support contracts will be closed out and a formal evaluation completed. The ITSM tool data will be archived and held for use in the intercensal years. The ITSM tool and IVR call management system will be decommissioned.

4. Cost Factors

The investment in DSC is projected to have minimal influence on the overall cost of the 2020 Census.

Impacts of this operation on overall 2020 Census quality include the following:

- ↑ Providing an efficient DSC operation will enhance quality of data collection by enumerators during the 2020 Census.

While the DSC operation is not a major cost driver for the 2020 Census, the following mechanisms from the IDEF0 Context Diagram represent the resources used to support this operation and comprise part of the 2020 Census cost elements:

Staff

- Headquarters (HQ) Staff
- DCEO Staff
- TI TD 116 Staff
- RCC Staff
- ACO Staff

Sites

- HQ
- DSC Call Center
- RCC
- ACO

Systems

- IVR
- Remedy
- Call Management System

Other

- DSC Contractor IT Infrastructure
- Office IT Infrastructure
- Census Networks

5. Measures of Success

For the 2020 Census operations, the corresponding Measures of Success will be documented in the operational assessment study plans and final reports. The operational assessment study plan documents the criteria used to define successful completion of the operation. The operational assessment report will provide results on whether the criteria were met.

In general, operational assessments report on planned to actual variances in budget, schedules, and production and training workloads. The corresponding Measures of Success (as documented in the operational assessment study plan) include variances exceeding established thresholds. See *Content Guidelines for the 2020 Census Operational Assessments* for the potential scope of assessment.

Types of success measures include:

- **Process Measures** indicate how well the process works, typically including measures related to completion dates, rates, and productivity rates.
- **Cost Measures** drive the cost of the operation and comparisons of actual costs to planned budgets. Costs can include workload as well as different types of resource costs.
- **Measures of the Quality** of the results of the operation, typically including things such as rework rates, error rates, and coverage rates.

See the corresponding operational assessment study plan and report for the Decennial Service Center operation (DSC) for details on the measures of success.

Appendix A – Acronyms and Terminology

Table 7 lists the acronyms and abbreviations used within this Detailed Operational Plan document.

Table 7: Acronyms and Abbreviations List

Acronym	Meaning
ACO	Area Census Office
ADC	Address Canvassing operation
ARC	Archiving operation
BPM	Business Process Model
BPMN	Business Process Model and Notation
CFD	Content and Forms Design operation
CMFO	Coverage Measurement Field Operations
COOP	Continuity of Operations Planning
DCEO	Decennial Contracts Execution Office
DLM	Decennial Logistics Management operation
DOTS	Decennial Operations Technical Support
DSC	Decennial Service Center operation
EAE	Evaluations and Experiments operation
ETL	Enumeration at Transitory Locations operation
FITd	Field Information Technology deployment
FLDI	Field Infrastructure operation
FPD	Forms Printing and Distribution operation
GEOP	Geographic Programs operation
GQ	Group Quarters operation

Acronym	Meaning
GSA	General Services Administration
HQ	Headquarters
IAC	Island Areas Censuses operation
IOD	Integrated Operations Diagram
IPC	Integrated Partnership and Communications operation
IPT	Integrated Project Team
IT	Information Technology
ITIN	Information Technology Infrastructure operation
ITSM	Information Technology System Management
IVR	Interactive Voice Response
KBA	Knowledge-based Article
NOC	Network Operations Center
NRFU	Nonresponse Followup operation
PDCC	Paper Data Capture Centers
PRAO	Puerto Rico Area Office
RA	Recruiting Assistant
RCC	Regional Census Center
SLA	Service Level Agreement
SOC	Security Operations Center
SPC	Security, Privacy, and Confidentiality operation
SSCIM	Safety, Security and Cyber Incident Management
TD	Technical Directive

Acronym	Meaning
TI	Technical Integrator
UAT	User Acceptance Testing
UE	Update Enumerate operation
UL	Update Leave operation

Appendix B – References

Appendix B lists the documents or other resources used during the development of this Detailed Operational Plan document.

U.S. Census Bureau (2017), “[2020 Census Operational Plan](#),” Version 3.0, September 29, 2017.

U.S. Census Bureau (2016), “Operational Assessment Content Guidelines for the 2018 End-to-End Census Test and the 2020 Census,” Draft, May 10, 2016.

Appendix C – Activity Tree for Decennial Service Center Operation (DSC)

This appendix presents the Activity Tree for the DSC operation. An Activity Tree uses an outline structure to reflect the decomposition of the major operational activities in the operation. Each activity is numbered according to its position in the outline. For example, for the current operation numbered “31,” the first activity would be numbered 31-1. Subactivities under this activity would be numbered sequentially, starting again with the number one. For example, the first subactivity under the first activity would be numbered 31-1.1 the second subactivity as 31-1.2. The second activity would be numbered 31-2, and so on.

DSC Activity Tree:

- 31-1 Perform DSC Planning and Preparation Activities
 - 31-1.1 Gather Operational Requirements
 - 31-1.2 Define Capability Requirements for Systems Supporting DSC
 - 31-1.3 Conduct UAT and Approve Systems Supporting DSC
 - 31-1.4 Acquire Staff
 - 31-1.5 Set Up Service Center
 - 31-1.6 Prepare for and Conduct Training
- 31-2 Provide Technical Support
 - 31-2.1 Receive Request for Service
 - 31-2.2 Diagnose Issue
 - 31-2.3 Resolve Ticket
 - 31-2.4 Handle Service Events and Process Notifications
- 31-3 Manage Support Services
 - 31-3.1 Report on Requests for Service
 - 31-3.2 Perform Oversight, Monitoring and Reporting
- 31-4 Closeout DSC Operation
 - 31-4.1 Capture Lessons Learned
 - 31-4.2 Create Final Report
 - 31-4.3 DSC Census Phase Out